BULLETIN du MUSÉUM NATIONAL d'HISTOIRE NATURELLE

PUBLICATION BIMESTRIELLE

zoologie

141

N° 211 JANVIER - FÉVRIER 1974

BULLETIN
du
MUSÉUM NATIONAL D'HISTOIRE NATURELLE

57, rue Cuvier, 75005 Paris

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International Standard Serial Number (ISSN) : 0027-4070.

BULLETIN DU MUSÉUM NATIONAL D'HISTOIRE NATURELLE
3e série, nº 211, janvier-février 1974, Zoologie 141

Malagasy Endomychidae : a Collection from the Andringitra Massif and Anosyennes chains (Insecta Coleoptera)

by H. F. Strohecker *

Résumé. — Description de deux genres nouveaux : *Malagaricophilus* (espèce type : *M. spilotus* sp. n.) et *Bryodryas* (espèce type : *B. lunidorsum* sp. n.). Les autres espèces nouvelles sont *Stenotarsus subglaber*, *S. nudus*, *S. microsetosus*, *S. cordipennis*, *S. apterus*, *S. acrophilus*, *Anagaricophilus stillifer*, *A. nitidus*, *A. rugosus*, *A. longus*, *A. stigmosus*. Les espèces *Haploscelis plagiicollis* (Fairmaire), *H. dejectus* Strohecker et *Cymones atroclavatus* (Fairmaire) sont représentées dans la collection étudiée. Les holotypes et allotypes des nouvelles espèces sont conservés au Muséum national d'Histoire naturelle (Entomologie), Paris. Sur les 14 espèces récoltées au-dessus de 1 500 m, 7 ont les ailes métathoraciques réduites ou absentes. Les descriptions d'*Anagaricophilus octospilotus*, du massif de l'Ankaratra, d'*A. vulneratus* et de *Geoendomychus contusus*, de Nandihizana (préfecture de Maroantsetra), ont été ajoutées.

Abstract. — Description of two new genera : *Malagaricophilus* (type species : *M. spilotus* sp. n.) and *Bryodryas* (type species : *B. lunidorsum* sp. n.). Other new species are *Stenotarsus subglaber*, *S. nudus*, *S. microsetosus*, *S. cordipennis*, *S. apterus*, *S. acrophilus*, *Anagaricophilus stillifer*, *A. nitidus*, *A. rugosus*, *A. longus*, *A. stigmatus*. In the studied collection, *Haploscelis plagiicollis* (Fairmaire), *H. dejectus* Strohecker and *Cymones atroclavatus* (Fairmaire) are represented. Holotypes and allotypes are kept in National Museum of Natural History (Entomology), Paris. Of 14 species taken above 1 500 m, 7 have inner wings reduced or absent. Descriptions added of *Anagaricophilus octospilotus*, from Ankaratra massif, *A. vulneratus* and *Geoendomychus contusus*, from Nandihizana (Maroantsetra Prefecture).

The Endomychidae taken in the course of the Recherche Coopérative sur Programme nº 225[1], established by the Centre National de la Recherche Scientifique, were sent to me for study by M. A. Descarpentries of the Entomological Laboratory of the National Museum of Natural History in Paris.

This family of beetles is eminently tropical and, while few genera have been found to be represented in Madagascar, numerous species have been described, especially of the genera *Haploscelis* and *Stenotarsus*. The collection made in the Andringitra massif (Center Madagascar) and the Anosyennes chains (East Madagascar) includes, besides material of these two genera, examples of Mycetaeids, up to now little known in Madagascar.

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1. 1971, *Bulletin de la Société d'Écologie*, 2 (2-3) : 189-266 ; 1973, *Bulletin du Muséum national d'Histoire naturelle*, 3e série, nº 118, janv.-févr., Écologie générale 1 : 1-40.

The most notable feature of this assemblage of specimens is the high proportion of forms with aborted metathoracic wings and highly convex elytra. The apterous condition is rare in the Endomychidae but I have noted it in the case of a few Asiatic species ; in these cases also the elytra are unusually convex. Of 14 Malagasy species taken above 1 500 meters 7 are flightless. What adaptation may be conferred by this loss of wings and elytral elevation is not self-evident ; perhaps it increases air space and enables the insect to survive periods of inundation during heavy rainfall. One may recall the experience of Heberdey (as quoted by Wigglesworth, 1939) that removal of the wings of Dytiscids allowed the beetles to prolong their period of submergence.

Appended to this report are descriptions of three new species based on specimens collected in other areas of Madagascar.

In the figures, except no. 17, pronotum and elytron have been drawn separately, in each case with lateral margins approximately perpendicular to line of sight.

Holotypes and allotypes of new species described are in the Muséum national d'Histoire naturelle, Paris. One or more paratypes, when available, are in author's collection.

Subfamily Eumorphinae

Genus *Haploscelis* Blanchard

Twenty-eight species of this endemic and essentially tropical genus have been described.

Haploscelis plagiicollis (Fairmaire)

Hybopterus plagiicollis Fairmaire, 1883, *Le Naturaliste*, **2** : 365, type male : Paris Museum.

The few specimens of this distinctive species which I have seen up to now have come from the Andringitra massif. In the collection now at hand are 18 specimens. The inner wings are absent and the elytra more gibbous than is usual in the genus but its basic structure is similar to the other species.

Andringitra Est : Anjavidilava, 1 850-1 950 m, 18-XII/15-I-1971, FDHM2 ; Marositry, Est riv. Antsifotra, 2 000 m, 2/5-XII-1970, FDSM ; Andringitra Centre : plateau Andohariana, 2 000-2 100 m, 9-XI/10-XII-1970, FDHM2.

Haploscelis dejectus Strohecker

Haploscelis dejectus Strohecker, 1972, *Cah. ORSTOM*, sér. Biol., **16** : 126, type male : Paris Museum.

The unique type was among specimens which became detached from card-mounts and its provenance could not be determined.

Andringitra Sud : Andrianony, cirque Manjarivolo, 1 800 m, 26-X/3-XI-1970, FDHM2, a single male.

Chaînes anosyennes : Massif nord, 1 050 m, moyenne Ranomandry, 11/30-XI-1971, FDHMA, a female which seems to be of this species.

Genus *Cymones* Gorham

Cymones atroclavatus (Fairmaire)

Dioedes atroclavatus Fairmaire, 1883, *Le Naturaliste*, **2** : 365, type female : Paris Museum.
Cymones cowani Gorham, 1886, *Proc. Zool. Soc. London*, **1886** : 158, type male : unknown to me.
Encymon armipes Fairmaire, 1899, *Ann. Soc. ent. France*, **68** : 469, type male : Paris Museum.

As recognized by me the species has wide distribution in tropical Madagascar. Some of the differences in color may represent racial divergence. Inner wings normal. Fifteen specimens with data

Chaînes anosyennes : Massif nord, 1 050 m, moyenne Ranomandry, 11/30-XI-1971, FDHMA.

Subfamily Stenotarsinae

Genus *Stenotarsus* Perty

Twenty-one Malagasy species of this large circumtropical genus have been described and additional species are recorded here. Some of these show unusual features but do not seem to transgress the accepted definition of *Stenotarsus*.

Stenotarsus subglaber sp. n.
(Fig. 1, 2)

Elliptic in outline, moderately convex for genus. Under surface, legs, antennal stalk, head and pronotum red, elytra, including epipleura, black with umbo, base narrowly and apex broadly red. Length 6,3-7,5 mm.

Although at 30× fine short hairs can be seen on upper surface the general aspect of the insect is glabrous. Antenna of male 2,8 mm, articles 3-8 longer than wide, club large, its last article almost square. Pronotum with median length 3/5 basal width, raised side margins low, flat, rather narrow (.2 mm) and of equal width throughout, disc finely and sparsely punctured, lateral sulci broad, shallow, transverse sulcus evident only near lateral sulci. Elytra broader at base than pronotum, umbo prominent, disc finely and sparsely punctured. The front border of the red apical area runs obliquely forward from suture to side margin. The first sternite of male is slightly concave at middle and there are two foveae behind each metacoxa. Inner wings normal.

Holotype male : Andringitra Est : Anjavidilava, 1 850-1 950 m, 18-XII/15-I-1971, FDHM2.

Allotype female : same data as holotype.

Paratypes : 1 male, 4 females with same data as holotype.

Stenotarsus nudus sp. n.
(Fig. 3, 4)

In general appearance much like a miniature of *S. subglaber* but with raised pronotal margins proportionately wider and antennal stalk articles bead-like, article 9 as wide distad as long, narrower than 10, 11 very large, longer than wide, its apex feebly rounded. Upper surface very finely punctured and apparently glabrous but fine short setae can be seen at 60×, especially in region of umbo. Length 3,3 mm, max. width 2,2 mm.

Holotype male : Andringitra Sud : Andrianony, cirque Manjarivole, 1 650 m, 26-X/3-XI-1970, FDHM1.

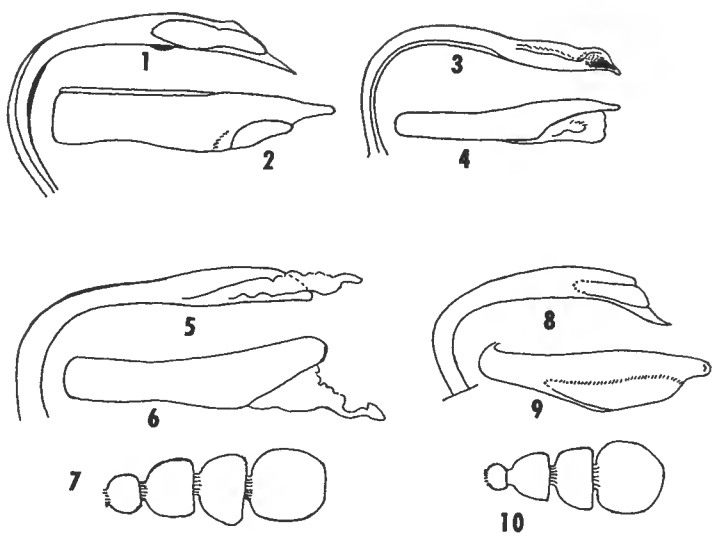

Fig. 1-10. — Gen. *Stenotarsus* Perty. — 1, *S. subglaber* sp. n., edeage, left side ; 2, *id.*, dorsal face. — 3, *S. nudus* sp. n., edeage, left side ; 4, *id.*, dorsal face. — 5, *S. microsetosus* sp. n., edeage, left side ; 6, *id.*, dorsal face ; 7, *id.*, antennal club. — 8, *S. cordipennis* sp. n., edeage, left side ; 9, *id.*, dorsal face ; 10, *id.*, antennal club.

Allotype female : same data as holotype.

Paratypes : 1 female with same data as holotype, 1 male, 10 females, Andringitra Est : Anjavidilava, 1 850-1 950 m, 18-XII/15-I-1971, FDHM2. The females are larger (4-4,5 mm) than the males and elytral coloration varies from similarity to males to elytra mostly red with large common black area but this is probably due to age differences. Inner wings normal.

Stenotarsus microsetosus sp. n.
(Fig. 5-7)

Of elliptic outline, about equally rounded in front and behind, normally convex for genus. Inner wings normal. Under surface, including elytral epipleura, dark red, last four sternites paler, metasternum of male tumid, coarsely and densely punctured at middle. Sternite 1 convex at middle, very finely punctured ; two foveoles behind metacoxa. Antennae stout, stalk articles bead-like, club large, articles 9-10 transverse, 11 almost square, truncate. Pronotum red, raised side margins low, wide and flat, lateral sulci continued as fine grooves to front margin, disc finely and sparsely punctured with sparse but conspicuous pubescence. Elytra rather coarsely punctured but with interspaces wider than punctures, pubescence sparse and short. Elytra black with base and apical fifth red. Length 3,8 mm, max. width 2,5 mm.

Holotype male : Chaînes anosyennes : Massif nord, moyenne Ranomandry, 1050 m, 11/30-XI-1971, FDHMA.

Stenotarsus cordipennis sp. n.
(Fig. 8-10)

Under surface, legs, head, antennal stalk, pronotum, scutellum, elytral base, umbo, side margins and apex red ; elytra mostly black, densely punctured and with fine recumbent pubescence. Length 3,5 mm, max. width 2,2 mm.

Antennal articles 5-7 slightly longer than wide, 10 transverse, 11 cycloid. Pronotum with basal width slightly more than twice median length, narrowed in front to half basal width, raised margins rather narrow (.1 mm), lateral sulci linear and deep, reaching to mid-length of pronotum, transverse sulcus shallow, indistinct, disc and sides conspicuously punctured and pubescent. Elytra 1,3 times as long as their combined width, a little wider at base than pronotum, widening slightly in anterior third then gradually narrowed to apices which are feebly attenuate and separately rounded. Metasternum of male densely, coarsely punctured, sternite 1 densely, coarsely punctured at middle and with two foveoles behind each metacoxa. Inner wings normal.

Holotype male : Chaînes anosyennes : Massif nord, haute Ranomandry, 1 900 m, 17/26-XI-1971, FDHM.

Allotype female : same data as holotype. The elytra of this specimen are ferruginous but this, I feel certain, is a teneral condition. In all other features, including punctation of metasternum and sternite 1, it is very similar to holotype.

Paratypes : 3 teneral ? females with same data as holotype.

Stenotarsus apterus sp. n.
(Fig. 11-13)

Oval in outline, strongly convex, under surface, including elytral epipleura, legs, antennal stalk and pronotum red. Elytra shining black with sparse recumbent tawny pubescence ; umbo dark red. Length 3 mm, max. width 2,1 mm.

Antennae stout, articles 4-5 short-cylindric, the other stalk articles bead-like, 9 evenly, widened distad and as long as wide, 10 transverse, 11 elliptic, slightly longer than wide, 1,5 times as wide as 9. Pronotum with raised margins very narrow (for genus) and flat, lateral sulci extending forward to mid-length and ending basad in a deep fovea. Elytra gibbous, overhanging lateral margins, tapering from anterior third and somewhat cordiform in outline, punctures conspicuous but well separated. Inner wings aborted. Metasternum convex, densely and coarsely punctured. Sternite 1 sparsely punctured and with foveoles behind metacoxa.

Holotype male : Chaînes anosyennes : forêt au pied Nord du Piton Andohahelo, 1 880 m, V-1972, FDHM.

Stenotarsus acrophilus sp. n.
(Fig. 14-16)

Oval in outline, highly convex, under surface and legs reddish black, antennal stalk, head and pronotum dark red, elytra, including epipleura, shining black with very fine, short, sparse pubescence. Length 3,4 mm, max. width 2,2 mm.

Antennae with articles 2-7 short-cylindric, 9 symmetrically widened to apex, 11 ovoid with apex subtruncate. Pronotum shining, sparsely punctured, side margins moderately wide, low and flat, lateral sulci linear and deep, transverse sulcus very close to hind margin. Elytra gibbous, overhanging side margins, sparsely punctured. Inner wings absent.

Holotype female : Chaînes anosyennes : Massif nord, haute Ranomandry, 1 900 m, 17/26-XI-1971, FDHM.
Paratypes : 3 females with same data as holotype.

Very similar to *S. apterus* and I have considered it as possibly the female of that species. It differs, however, in several features : the prosternal process is much broader than in *S. apterus*, the mesosternum more declivent in front and the antennae slenderer with longer stalk articles. The under surface is pitchy in *S. acrophilus*, clear red in *S. apterus*.

Subfamily Mycetaeinae

Generic definitions are still difficult in this group. A number of type species are known from little material, some from unique specimens.

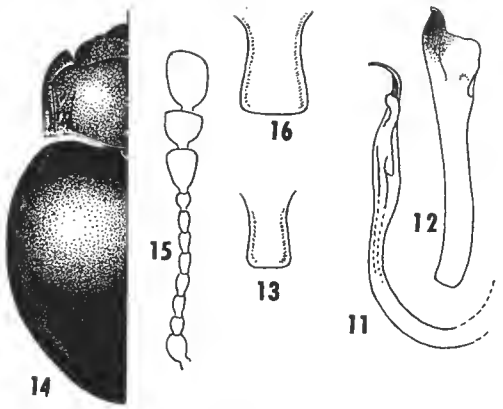

Fig. 11-16. — Gen. *Stenotarsus* Perty. — 11, *S. apterus* sp. n., edeage, left side ; 12, *id.*, dorsal face ; 13, *id.*, prosternum (same scale as fig. 16). — 14, *S. acrophilus* sp. n., habitus ; 15, *id.*, antenna ; 16, *id.*, prosternum (same scale as fig. 13).

Genus *Anagaricophilus* Arrow

Devised by Arrow for *A. pulchellus* based on a single specimen from the Seychelles. J. Vinson added a second species, *A. concinnus*, from Mauritius. A feature of *A. concinnus* not noted by Vinson is a small dimple at the elytral apex of some specimens, probably males.

Although Arrow described the tarsus of *A. pulchellus* as having four articles and it was so illustrated by me from drawings received from the British Museum (Nat. Hist.), the late Dr. Vinson and I examined the unique type in 1960 and agreed that the small penultimate tarsomere of Arrow's diagnosis could not be discerned.

The new species here placed in the genus have the prosternal process completely margined, palps large, last article of maxillary palp oval, of labial palp subcycloid ; three tarsomeres ; lateral sulci of pronotum with external carina coursing far forward.

Anagaricophilus stillifer sp. n.
(Fig. 17)

Reddish black below with elytral epipleura red ; shining black above, each elytron with three orange markings. Length 2,2-2,4 mm.

Ten antennomeres, 1-2 stout, 3 slender, 4-7 bead-like, 8-10 forming broad loose club which is as long as stalk ; stalk red, club black. Pronotum with sides parallel in basal half, rounded to blunt front angles, narrowly margined, discal punctures and setae fine and sparse, lateral sulci deep, triangular and connected by a transverse sulcus close to hind margin. Elytra strongly convex in both axes, parasutural stria deep but evanescent near

triangular scutellum, punctures deep, rather coarse and dense, setae hardly evident. Of the orange markings two are rounded and occupy an oblique line before mid-length, the third is a transverse bar on apical slope.

In male each elytron has a rounded prominence before apex and distomesad of this eminence the sutural margin has a dense row of erect setae. Elytral apex of female simple. Inner wings fully developed.

Holotype male : Andringitra Sud : Andrianony, cirque Manjarivolo, 1 650 m, 26-X/3-XI-1970, FDHM1.

Allotype female : Andringitra Centre, plateau Andohariana, 2 000-2 100 m, 9-XI/10-XII-1970, HFAM1.

Paratype : male with data of allotype (these two specimens somewhat teneral). Three females, Maroantsetra pref., Nandihizina, 10-XII-1938 (*J. Vadon*) appear also to be of this species.

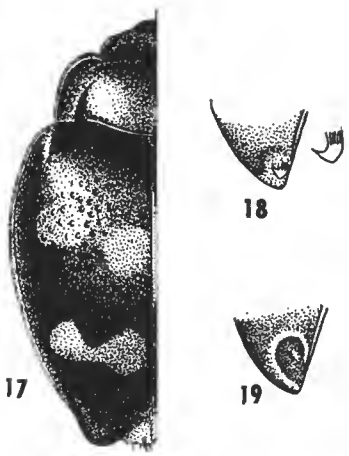

Fig. 17-19. — Gen. *Anagaricophilus* Arrow. — 17, *A. stillifer* sp. n., habitus, ♂. — 18, *A. vulneratus* sp. n., apex of elytron of ♂. — 19, *A. nitidus* sp. n., apex of elytron of ♂.

Anagaricophilus nitidus sp. n.
(Fig. 19)

Of elliptic outline, highly convex, under surface black, antennal stalk dark red, upper surface shining black, finely and sparsely punctured, with a minute seta (60×) in each puncture, legs black, tarsi reddish. Length 1,4 mm, max. width 1,25 mm.

Ten antennomeres, 1-2 long and stout, 3 narrow, short-cylindric, 4-7 bead-like, 8-10 forming a large, loose club which is as long as 1-7 combined. Pronotum nearly twice as wide as its median length, sides narrowly margined, nearly parallel up to the curvature to front angles, lateral sulci triangular and deep, basal sulcus close to hind margin. Elytra almost 3× as long as pronotum, their sides continuously rounded, parasutural stria evanescent toward scutellum. Wings fully developed Legs rather long, slender, tarsi slender, third tarsomere equal to first two combined.

In male elytral tip is arcuately impressed, the impressions in caudal view have the form of a conventionalized heart. Elytral tips of female simple.

Holotype male : Andringitra Est : Anjavidilava, 2 000 m, 18-XII/15-I-1971, FDSMP.
Allotype female : Anjavidilavə, 1 850-1 950 m, FDHM2.
Paratypes : male, Andringitra Centre : plateau Andohariana, 2 000-2 100 m, 9-XI/10-XII-1970, HFAM1 ; female with same data as allotype, female, Andringitra Sud : Andrianony, cirque Manjarivolo, 1 650 m, 26-X/3-XI-1970, dans mousses sur arbre, FDHM1 ; Chaînes anosyennes : Massif nord, 1 050 m, moyenne Ranomandry, 11/30-XI-1971, FDHMA.

Anagaricophilus rugosus sp. n.
(Fig. 20)

Outline short-elliptic, strongly convex, black below and above, tibiae, tarsi and antennal stalk pale and each elytron with three or four yellow marks, sparsely pubescent. Length 1,6 mm, max. width 1,15 mm.

Antennomeres ten, 1-2 stout but longer than wide, 3 slender, 5-7 bead-like, 8-10 forming large club which is 2/3 as long as stalk. Pronotum coarsely and densely punctured, sides about parallel basad, raised margin rather broad in front but narrowed to hind angles, lateral sulci broadly triangular, connected by deep transverse sulcus close to hind margin. Elytra strongly convex in both axes, side margins rather wide, parasutural stria feeble in front but deeper caudad, surface densely and coarsely punctured. Each elytron has a round yellow spot on mid-line before middle and a similar spot meso-caudad of this. Behind the outer spot is a long-triangular spot and behind the inner spot is a J-shaped (left elytron) yellow mark, this tending to coalesce with the triangular spot to form a U. Elytral tips of female are feebly produced. Inner wings absent.

Holotype male : Andringitra Est : Marositry, Est riv. Antsifotra, 2 000 m, 2/5-XII-1970, FDSM.
Allotype female : data same as for holotype.
Paratypes : 4 females with same data as holotype and 2 females from Anjavidilava, 1 850-1 950 m, 18-XII/15-I-1971, FDHM2.

Anagaricophilus longus sp. n.
(Fig. 21, 22)

Form long-elliptic, moderately convex, reddish black below, black above, each elytron with three large yellow markings, coarsely punctured, sparsely pubescent. Length 2 mm, max. width 1,2 mm.

Antennomeres ten of which 7-10 form a club subequal in length to stalk. Pronotum 2,3 times as wide as its median length, narrowly margined at sides, lateral sulci triangular and shallow, transverse sulcus narrow, close to hind margin. Elytra about 3,5 times as

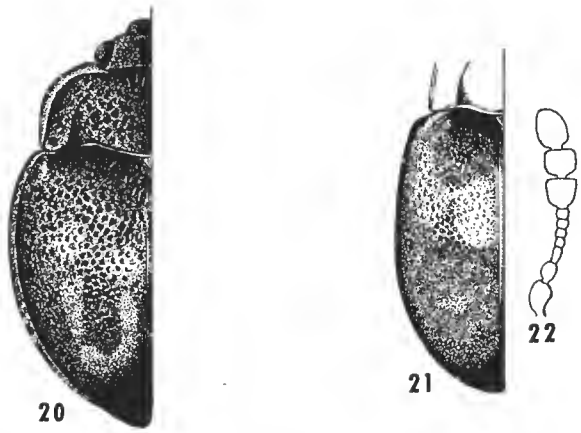

Fig. 20-22. — Gen. *Anagaricophilus* Arrow. — 20, *A. rugosus* sp. n., habitus. — 21, *A. longus* sp. n., habitus ; 22, *id.*, antenna.

long as pronotum, sides subparallel from base to apical third, evenly rounded to apex, surface coarsely and densely punctured. Each elytron has a broad yellow vitta extending from base across umbo to near mid-length, a large semicircular spot touching the parasutural stria and a large triangular yellow mark covering most of caudal slope. Inner wings normal.

Holotype female : Andringitra Centre : plateau Andohariana, 2 000-2 100 m, 9-XI/10-XII-1970, HFAM1.

Anagaricophilus stigmatus sp. n.

(Fig. 23)

Lower surface and legs black, elytral epipleura dark red. Upper surface highly convex, sparsely pubescent, black, each elytron with four yellow spots. Antennal stalk and tarsi pale. Length 1,75 mm, max. width 1,25 mm.

Nine antennomeres, 1-2 stout but longer than wide, 3 slender, cylindric, 4-6 bead-like, 7-9 forming a stout club which is slightly shorter than 1-6 combined. Pronotum 2X as wide as its median length, strongly convex in transverse axis, side margins wide in front, narrowed to the obtuse hind angles, lateral sulci broadly triangular and very shallow basad, connected by a transverse sulcus, disc distinctly but rather finely punctured. Elytra highly convex in both axes, narrowly margined, densely and rather coarsely punctured, parasutural stria feeble on basal half, distinct caudad. Each elytron has a round yellow spot near suture and mid-length and, slightly anterior to this an angulate spot on lateral slope. Behind these is a pair of spots similarly placed. Inner wings absent.

Holotype female : Andringitra Est : Anjavidilava, 2 000 m, 18-XII-15-I-1971, FDSMP.

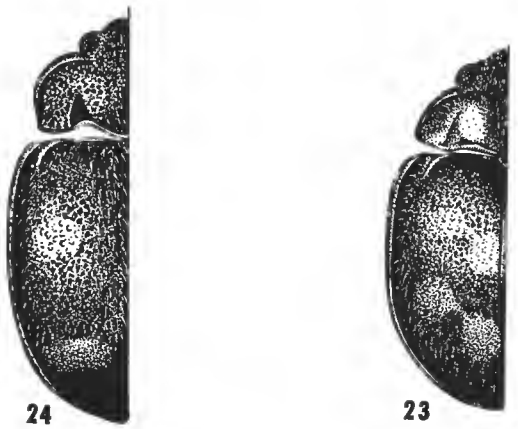

FIG. 23-24. — 23, *Anagaricophilus stigmatus* sp. n., habitus. — 24, *Malagaricophilus spilotus* gen. and sp. n., habitus.

Genus **Malagaricophilus** nov.

Tarsi trimerous, unlobed, mandible minutely trifid at apex, last article of maxillary palp subconical, of labial palp strongly transverse. Prosternum briefly prolonged behind coxae, its apex spatulate, margined. Mesocoxae narrowly separated, their cavities closed by sterna. Elytra without parasutural stria. Pronotum with base strongly undulate, i.e. lobed at middle.

Type species : *Malagaricophilus spilotus* sp. n.

Malagaricophilus spilotus sp. n.
(Fig. 24)

Long-oval in form, moderately convex, black below and above, coarsely pubescent, each elytron with two round yellow spots near mid-line. Length 2 mm, max. width 1,4 mm.

Antennal stalk yellow, its first two articles stout, 3 narrow and cylindric, 4-7 bead-like, 8-10 forming a large black club which is slightly shorter than the stalk. Head coarsely, shallowly punctured. Pronotum with sides continuously rounded, marginal bead narrowed behind, lateral sulci broad, triangular, deep, transverse sulcus very close to hind margin, surface coarsely and rather closely punctured, pubescence gray. Elytra 3× or more as long as pronotum, subparallel, densely and coarsely punctured. Each elytron has two transversely oval orange marks near mid-line, the first a little before mid-length, the second on caudal slope. Inner wings strap-like, no longer than elytra.

Holotype female : Andringitra Est : Anjavidilava, 2 000 m, 18-XII/15-I-1971, FDSMP.

Genus **Bryodryas** nov.

Highly convex, subhemispherical. Tarsi trimerous, stout, claws appendiculate. Antennomeres nine, of which the last three form a stout club. Last article of maxillary palp conoid and minutely truncate, of labial palp very large and broadly truncate. Mandible bifid at tip. Prosternal process prolonged behind coxae, its apex slightly narrowed, rounded. Mesocoxae rather narrowly separated, their cavities closed by the sterna. Scutellum transversely triangular. Upper surface coarsely pitted, parasutural stria of elytra very wide and deep. The generic name is feminine.

Type species : *Bryodryas lunidorsum* sp. n.

Bryodryas lunidorsum sp. n.

(Fig. 25-29)

Black below and above, legs, elytral epipleura and antennae paler. Length 1,3 mm, max. width 1,15 mm.

Antennomeres 1-2 oval, stout, 3 much narrower than 2 but hardly longer than wide, 3-6 bead-like, club about as long as stalk, the last article cycloid. Pronotum twice as wide as median length with transverse impressed line near front margin, sides continuously curved, marginal bead wide near front angles, narrowed behind, surface with crater-like punctures, lateral sulci deep, triangular, transverse sulcus deep and close to hind margin. Elytra very convex in both axes with dense crater-like punctures, parasutural stria wide and deep, sutural area smooth. At 60× some minute setae can be seen but the insect appears glabrous. Inner wings absent.

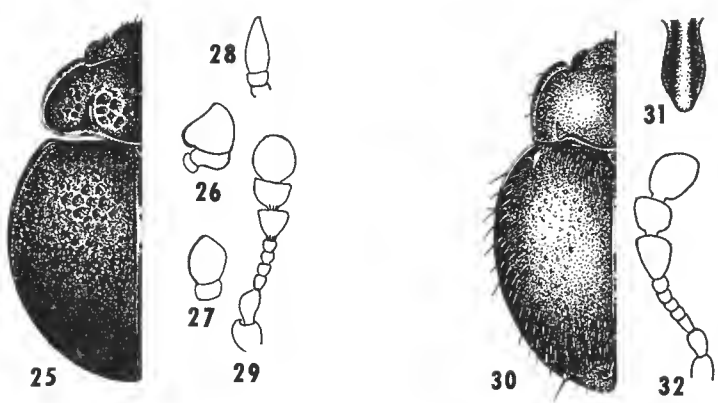

Fig. 25-32. — 25, *Bryodryas lunidorsum* gen. and sp. n., habitus ; 26, 27, *id.*, labial palp ; 28, *id.*, maxillary palp ; 29, *id.*, antenna. — 30, *Geoendomychus contusus* sp. n., habitus ; 31, *id.*, prosternum ; 32, *id.*, antenna.

Holotype (sex ?) : Andringitra Sud : Andrianony, cirque Manjarivolo, 1 650 m, 26-X/3-XI-1970, FDHM1, mousses sur rocher.

Paratype : female with same data as holotype. This specimen fell apart when relaxed and has been mounted in Euparal.

Anagaricophilus vulneratus sp. n.
(Fig. 18)

Under surface black, legs and antennal stalk yellow, above shinning black, each elytron with two transverse yellow areas. Length 1,5 mm.

Nine antennomeres, 1-2 stout, 3 short-cylindric, 4-6 bead-like, 7-9 forming a broad club which is as long as stalk. Pronotum strongly convex, distinctly punctured, narrowly margined at sides, lateral sulci triangular, shallow but with long external carina, transverse sulcus deep, close to hind margin. Elytra coarsely and rather densely punctured, each with a transversely quadrate orange bar on basal half and a similar but smaller pre-apical bar. Inner wings normally developed.

In male each elytron is deeply impressed at apex and within the impressed area is a recurved hook, evidently formed of agglutinated setae.

Holotype male : Madagascar : Maroantsetra pref., Nandihizina, 12-X-1938 (*J. Vadon*).

Anagaricophilus octospilotus sp. n.
(Fig. 33-35)

Dark red beneath, legs and antennal stalk reddish. Antennal club black. Upper surface deep black, shining, each elytron with four yellow spots. Length 1,6 mm, max. width 1,1 mm.

Tarsi trimerous, unlobed. Prosternal process prolonged behind coxae, its apex rounded, margined. Antennomeres nine, 1-2 stout but longer than wide, 3 slender, 4 quadrate, 5-6 bead-like, 7-9 forming large club which is 3/4 as long as stalk. Last article of maxillary palp long-oval, of labial palp subquadrate, broadly truncate. Pronotum twice as wide as long, narrowly margined, strongly convex, finely punctured, setae minute and sparse, lateral sulci triangular, rather deep, their external carina reaching to middle of disc, transverse sulcus close to base. Elytra rather coarsely and densely punctured, the interspaces about equal to punctures. Setae minute, sparse. Wings normal.

Holotype female : Massif de l'Ankaratra, Mont Tsiafajavona, 2 640 m, 7/12-I-1972, VR.

Paratypes : two females with same data as holotype. In one of the paratypes the caudal spot is narrowly connected to a small lateral spot at the same latitude ; in the other paratype there is a dark interval between these spots. It seems evident to me that these two conditions represent stages in the development of pattern shown by the holotype.

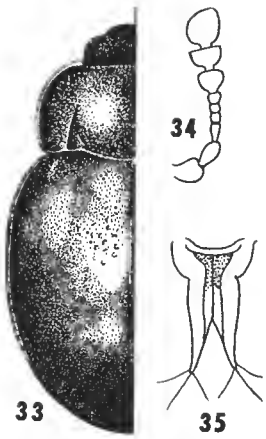

FIG. 33-35. — Gen. *Anagaricophilus* Arrow. — 33, *A. octospilotus* sp. n., habitus ; 34, *id.*, antenna ; 35, *id.*, female genitalia (ventral).

Genus *Geoendomychus* Lea

I am not altogether happy with generic placement of the new species described below. Referral to *Geoendomychus* agrees fairly well with ARROW's use of the name but I have seen but one specimen of the generotype, *G. pubescens* Lea from Lord Howe Isl., and have now no specimen of it for comparison. As the mycetaeids become represented by more material in collections it will probably be useful to define additional genera.

Geoendomychus contusus sp. n.
(Fig. 30-32)

Lower surface, legs and antennal stalk reddish, black above, each elytron with a large red marking covering most of caudal half. Length 1,6 mm, max. width 1,2 mm.

Antennomeres ten, 1-2 stout but longer than wide, 3 cylindric, 4-7 transverse, 8-10 forming a very large club which is longer than 1-7 combined. Pronotum convex, sides narrowly margined, parallel basad, much rounded to front angles, disc finely and sparsely punctured, lateral sulci short, triangular and shallow, transverse sulcus close to hind margin. Elytra but little wider at base than pronotum, roundly widened to mid-length, thence continuously rounded to apex, lateral margins, in dorsal view, invisible except near base, surface fairly densely and coarsely punctured (punctures about equal to interspaces), pubescence not dense, moderately long, semi-erect. Last article of labial palp transverse. Prosternal process contracted toward apex which is rather narrowly rounded and unmargined.

In the male the elytral apex is dimpled, the sutural margin within the dimple elevated and with a recurved bristle. Lateral to the dimple is a small conical eminence bearing a large seta directed caudad. The cone is well removed from the margin but the elytron

has been posed to bring it into sharp view. The seta is apparently compound ; on the left elytron it appears double, although single on the right (which has been used in the figure).

Holotype male : Maroantsetra pref., Nandihizina, 10-XII-1938 (*J. Vadon*).

Manuscrit déposé le 27 février 1973.

Bull. Mus. natn. Hist. nat., Paris, 3e sér., nº 211, janv.-févr. 1974, Zoologie 141 : 301-315.

Achevé d'imprimer le 30 septembre 1974.

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